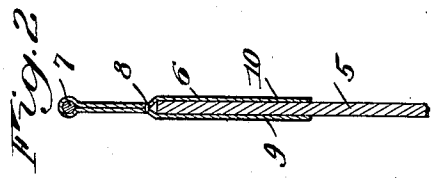
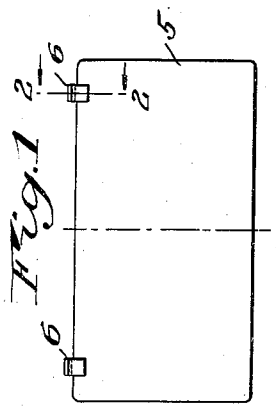
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METHOD AND APPARATUS FOR APPLYING TABS TO CARDS AND THE LIKE

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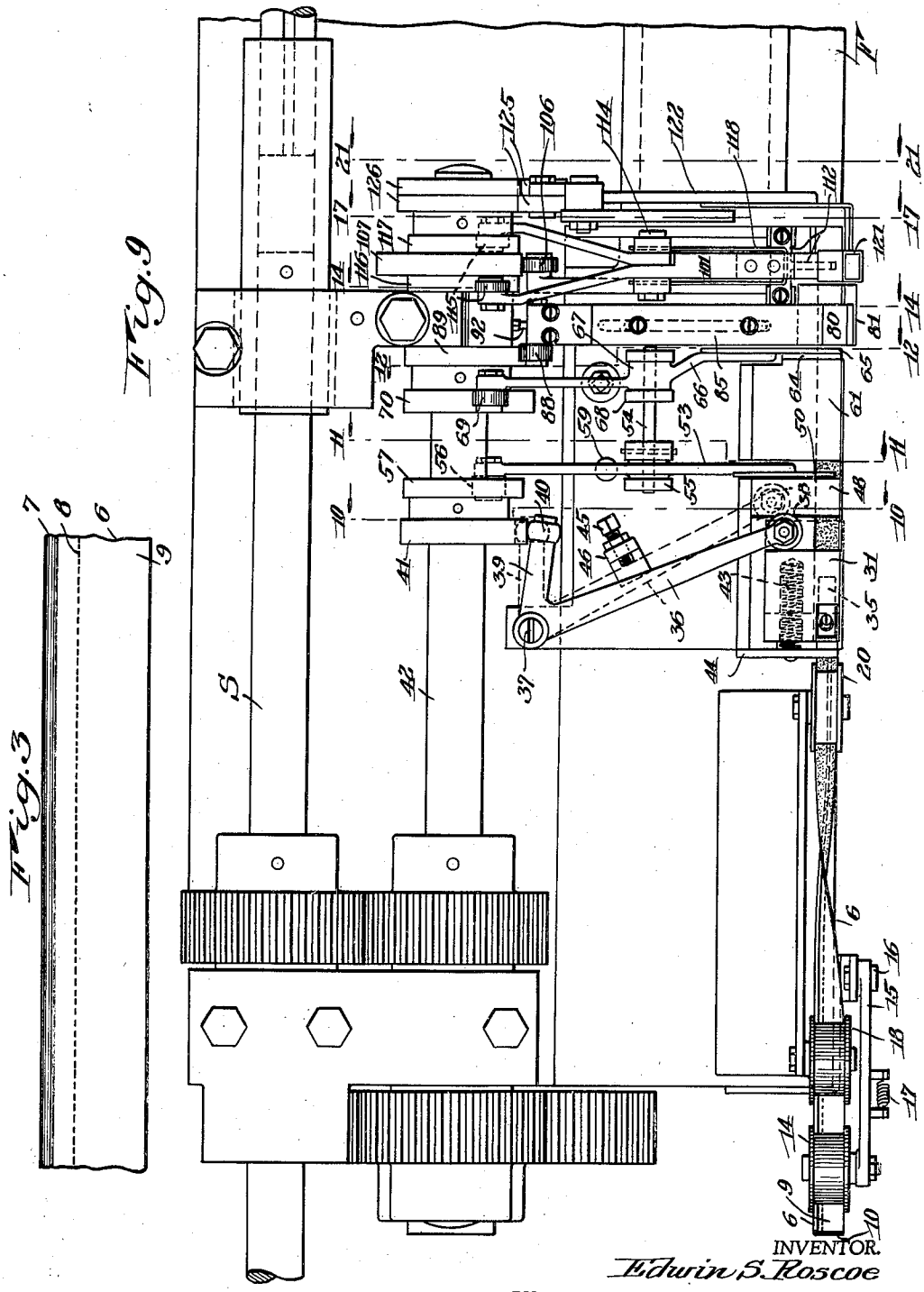
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METHOD AND APPARATUS FOR APPLYING TABS TO CARDS AND THE LIKE

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Fig. 3



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METHOD AND APPARATUS FOR APPLYING TABS TO CARDS AND THE LIKE

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Fig. 10

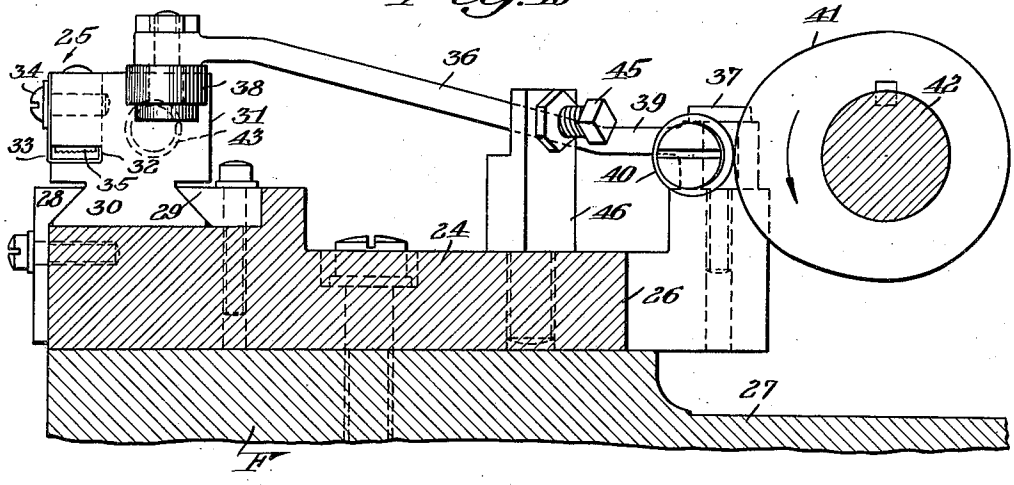


Fig. 11

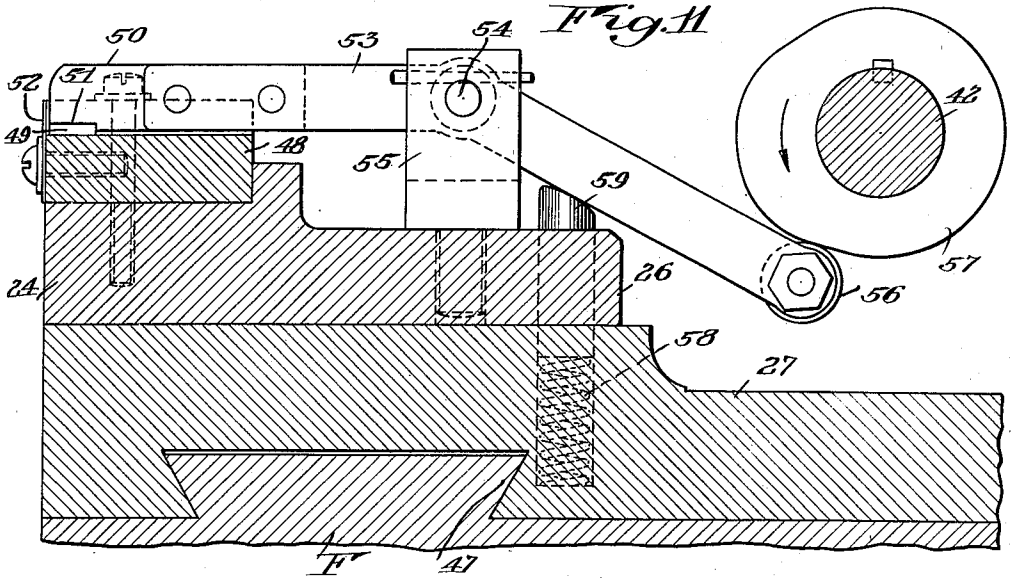


Fig. 6

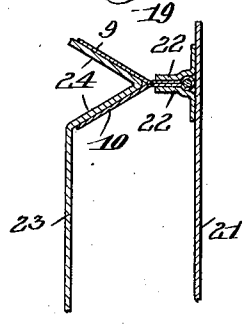


Fig. 7

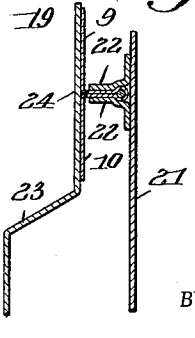
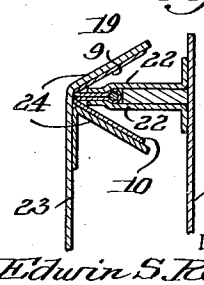


Fig. 8



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METHOD AND APPARATUS FOR APPLYING TABS TO CARDS AND THE LIKE

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Fig. 12

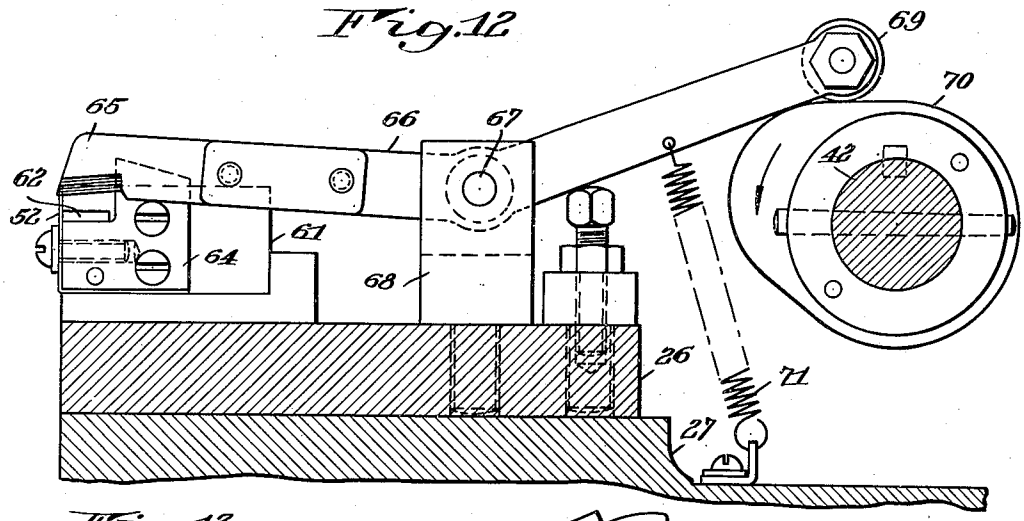


Fig. 13

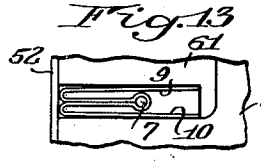
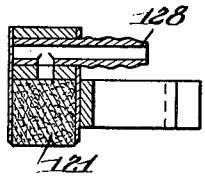
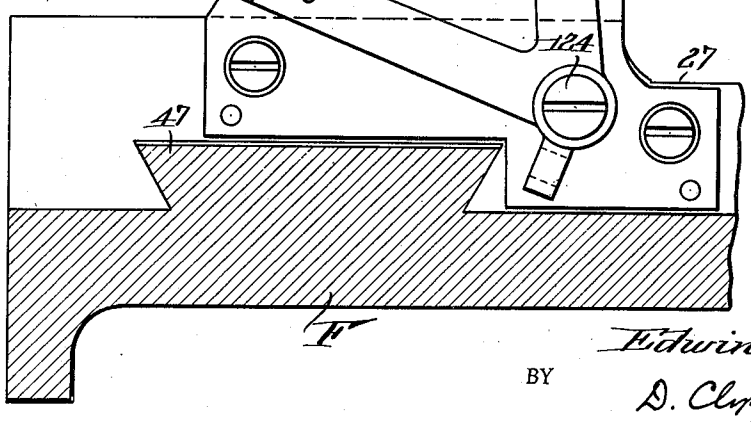


Fig. 21

Fig. 22





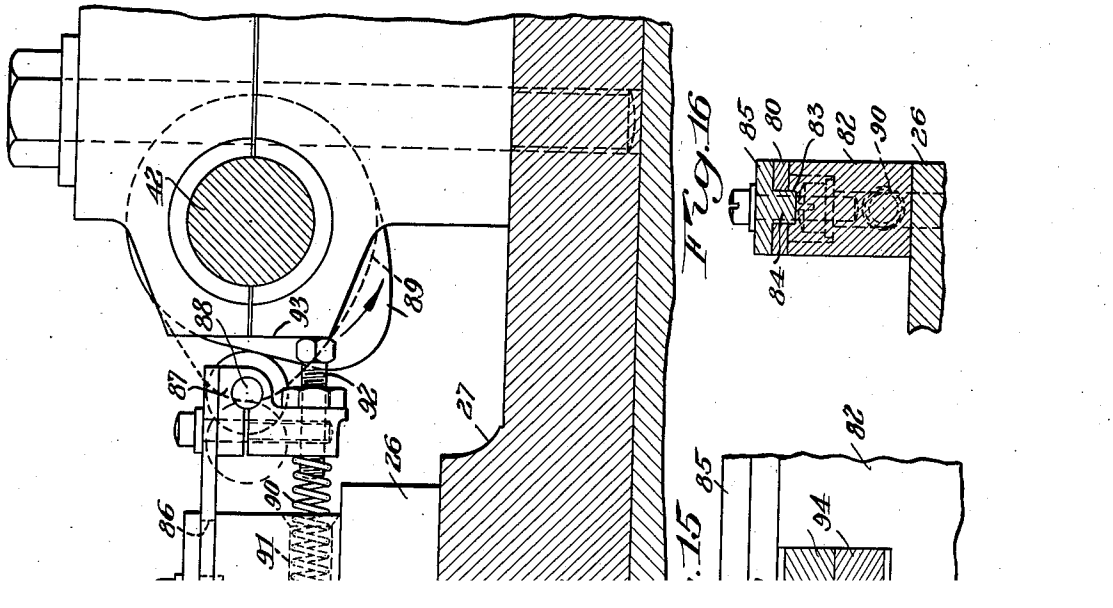
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METHOD AND APPARATUS FOR APPLYING TABS TO CARDS AND THE LIKE

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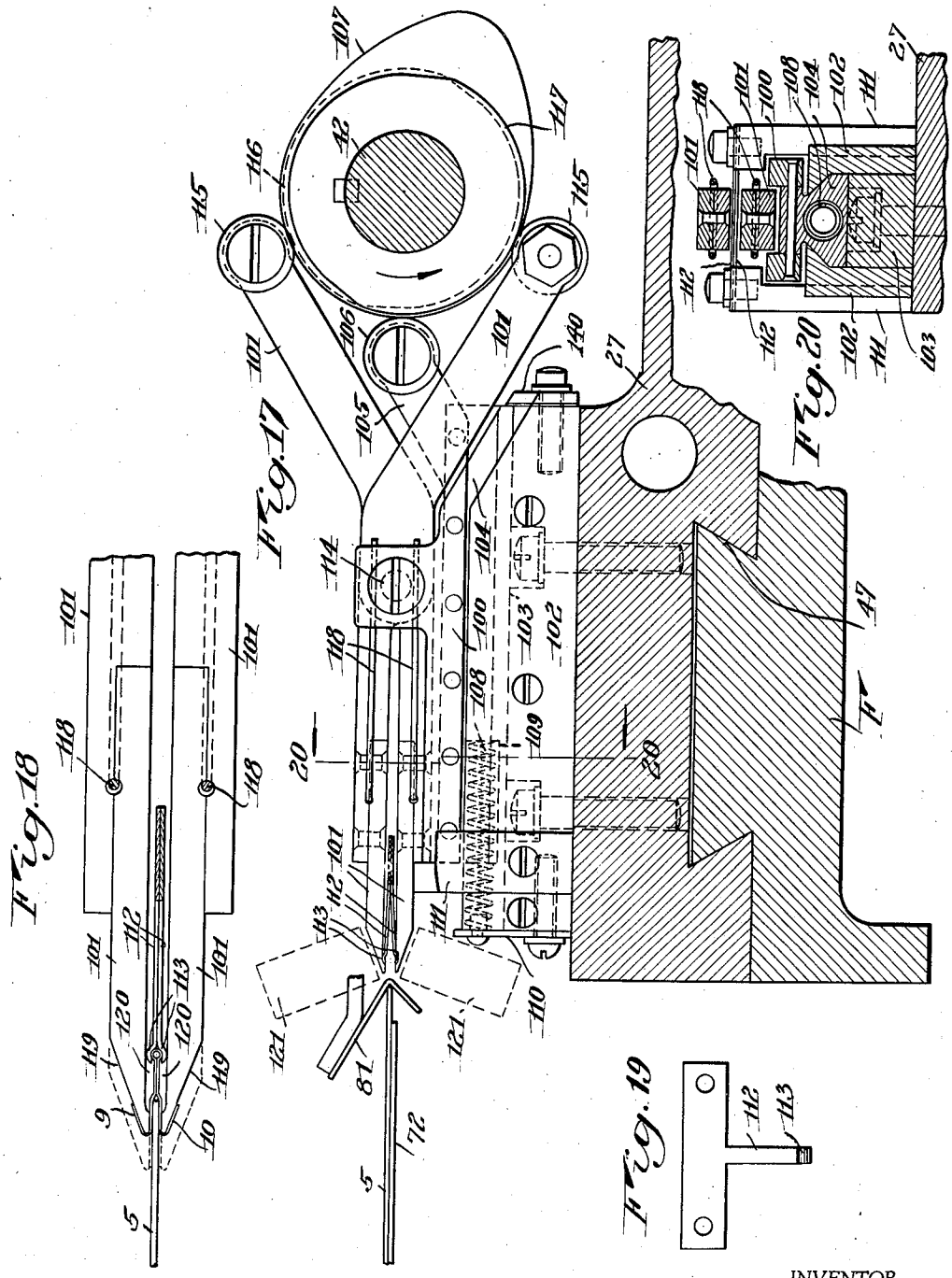


Fig. 17

Fig. 20

Fig. 18

Fig. 19

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Patented Aug. 6, 1940 2,210,433

UNITED STATES PATENT OFFICE

2,210,433

METHOD AND APPARATUS FOR APPLYING TABS TO CARDS AND THE LIKE

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Application October 27, 1937, Serial No. 171,273

21 Claims. (Cl. 93—1)

This invention relates to the method of and to apparatus for applying a hinge or tab to an index card, paper sheet or the like.

At the present time certain types of tabs or hinges are manually applied to index cards or the like because the material from which the tabs or hinges are made, is such that improved methods of application presented numerous difficulties. Such manual application has resulted in an irregular positioning of the tabs or hinges on the cards and adds considerably to the cost of manufacture.

It is therefore an object of this invention to provide a novel method of applying a hinge or tab to an index card which method produces more uniform finished articles at a reduced cost.

It is a further object of this invention to provide a machine which eliminates substantially all manual operations in the application of hinges or tabs to index cards or the like.

It is a still further object of the invention to provide a machine which accurately and automatically applies a hinge or tab at any predetermined point on the margin of an index card or the like.

The various features and advantages of the invention will appear from the detailed description and the claims when taken with the drawings in which Fig. 1 is a front elevation of an index card having fabric hinges attached thereto; Fig. 2 is an enlarged fragmentary cross section taken through the hinge and card of Fig. 1 on the line 2—2 thereof; Fig. 3 is an enlarged plan view of the fabric hinge material; Fig. 4 is a front elevation of one-half of the machine of the present invention for applying fabric hinges to index cards such as shown in Fig. 1; Fig. 5 is an enlarged section taken on line 5—5 of Fig. 4 illustrating how a roll of fabric hinge material is interleaved with strips of paper so that the successive turns of the material lie substantially parallel to the face of the spool; Figs. 6, 7 and 8 are respectively sections taken on the lines 6—6, 7—7 and 8—8 respectively of Fig. 4 illustrating an arrangement for folding the fabric hinge material back upon itself; Fig. 9 is a fragmentary plan view of substantially one-half of the machine (shown in elevation in Fig. 4) illustrating the mechanism for applying the fabric hinge to one end of the card, it being understood that this mechanism will be duplicated in reverse order of parts for the purpose of attaching a hinge near the other end of the card; Fig. 10 is an enlarged section taken substantially on the line 10—10 of Fig. 9 showing particularly the reciprocating mechanism for feeding the fabric hinge material progressively toward the cards to which it is to be attached after it is cut into hinges; Fig. 11 is an enlarged cross section taken substantially along the line 11—11 of Fig. 9 disclosing the means for intermittently clamping the fabric material while the reciprocating feeder is moving backward to engage a successive portion of the hinge material; Fig. 12 is an enlarged cross section taken substantially on the line 12—12 of Fig. 9 illustrating especially the mechanism for cutting fabric hinge material into pieces or hinges of desired length; Fig. 13 is an enlarged fragmentary view showing the fabric hinge material in position in the cutter; Fig. 14 is a cross section taken on the line 14—14 of Fig. 9 particularly disclosing the index card supporting mechanism and the guide for supporting the pieces of the fabric hinge material; Fig. 15 is an enlarged fragment of a portion of Fig. 14; Fig. 15*a* is a perspective view of one of the guide elements; Fig. 16 is a cross section taken on line 16—16 of Fig. 14; Fig. 17 is a cross section taken on the line 17—17 of Fig. 9 disclosing the hinge-applying unit; Fig. 18 is an enlarged fragment of the hinge-applying jaws indicating how they travel during the application of a hinge to an index card; Fig. 19 is a plan view of one of the spring gripping fingers shown especially in Figs. 17 and 18; Fig. 20 is a section taken on the line 20—20 of Fig. 17; Fig. 21 is a section taken on the line 21—21 of Fig. 9, showing the construction of the means for moistening gum or adhesive of the flaps of the hinge material; and Fig. 22 is a cross section taken on the line 22—22 of Fig. 21 disclosing in detail, means for supplying water to the moistening pads.

At the present time certain types of index cards 5 (Figs. 1 and 2) are provided with spaced hinges 6 by which the cards may be detachably mounted in a card index file. Each hinge 6 (Fig. 2) is preferably made of a strip of suitable fabric folded medially lengthwise on itself. Within the fold of the material there is inserted a cord or other circular filler 7 so that the fold is of substantially circular cross section whereby the hinge may be gripped by suitably shaped engaging members of the card index file. The folded strip of material is provided with a line of stitching 8 at a point spaced from the fold and parallel thereto and the superimposed layers of fabric between the filler 7 and the line of stitching 8 may have their inner surfaces attached together by means of adhesive. It will be appreciated that the material beyond the line of stitch-

ing, provides two flaps 9 and 10 coated with adhesive on their inner surfaces and adapted to be adhesively attached to portions of one margin of the opposing surfaces of the card 5.

Prior to this time it has been necessary to attach such hinges to index cards manually owing to the difficulty encountered in mechanically effecting such attachment. In accordance with the present invention, the fabric hinge material 6 is wound on a reel or spool 11, the successive turns of the hinge material being interleaved with strips of paper 12 of such thickness and width that the material will lie substantially parallel to the surface of the spool on which it is wound, as shown in Fig. 5, in spite of the fact that the edges of the material are of different thicknesses. It will be noted from Fig. 5 that the flaps 9 and 10 of the hinge material lie in superimposed position when the material is on the reel.

The reel 11 wound with the hinge material in the manner just described, is detachably mounted on a vertical support 13 carried by the frame F of the machine for automatically applying the hinges to the index card. From the reel the hinge strip 6 passes around a tension roll 14, this roll being mounted at the free end of an arm 15 pivoted at 16 on the frame of the machine and normally tensioned downwardly by the spring 17, thus assuring that the strip of hinge material will be taut, as it is fed into the machine. From the tension roll 14 the hinge strip passes between a pair of guide rolls 18. After the hinge strip leaves these guide rolls its flaps 9 and 10 pass over a former 19 (Figs. 6, 7 and 8) secured to the base of the machine and thence to a second pair of guide rolls 20. The former comprises a support 21 provided with suitably shaped members 22 which receive and guide the body portion of the hinge material. The former 19 includes a second support 23 provided with a section 24 which engages the adhesive faces of the flaps 9 and 10 and is of such contour that the flaps 9 and 10 of the strip begin to separate, immediately after they leave the guide rolls 18 and are successively bent backward through the positions shown in Figs. 6 and 7 to the position shown in Fig. 8 wherein the gummed surface of the flaps 9 and 10 are exposed as the strip enters the guide rolls 20. The former 19 has been omitted from Figs. 4 and 9 in order to show more clearly the manner in which the flaps 9 and 10 are folded back.

From the guide rolls 20 the hinge strip passes into a reciprocating feeding head 25 which functions periodically to feed the hinge strip the distance of one hinge length, to the cutting unit to be described. The feed unit 25 (Fig. 10) comprises a mounting plate 26 secured to an adjustable bed plate 27 (to be described) of the machine. The front side of the plate 26 is provided with wedge-shaped guides 28 and 29 to receive a slide 30 on the feed block 31. This block is made with a kerf 32 through which the hinge material with its folded back flaps passes, the open end of the kerf being closed by a U-shaped plate 33 secured as at 34 to the front face of the block. The block has secured thereto a flat feed spring 35 sloping downwardly toward the right as illustrated in Fig. 4, and having its lower free end serrated so that as the block is reciprocated toward the right its serrated edge engages and advances the hinge strip. When however, the feeding block is reciprocated toward the left, the serrated end of the flat spring readily passes over the top surface of the strip, the retrograde movement of the strip being prevented by a clamp to be described. The feed block 31 is reciprocated by a bell crank lever 38 pivotally mounted at 37 on an upright of the plate 26 for swinging movement and provided with a roller 38 at one end which engages the right-hand end face of the block. The short arm 39 of the bell crank lever is provided with a roller or follower 40 which engages the surface of a cam 41. This cam is mounted on the cam shaft 42 which serves not only to drive the various parts but to effect their operation in proper timed relation. The cam shaft is geared to a drive shaft S (Fig. 9) driven by a motor (not shown). A coil spring 43 engaging a stop 44 on the plate 26 and also engaging in a recess in the feeding block 31 tends to force the block toward the right in Figs. 4 and 9 so that the follower 40 on the bell crank lever engages the surface of the cam 41 during the timed movement of the feeding block. A set screw 45 adjustable in an upright 46 carried by the mounting plate 26, limits the counter-clockwise movement of the bell crank lever so that the length of feed is controlled by adjustment of the set screw 45. Follower 40 does not continually engage the cam 41 in the extreme right position of the block until the limit of set screw adjustment is reached.

It has been mentioned that clamping means are provided to prevent retrograde movement of the hinge strip after it has been advanced in the manner just described. This clamping means, as best shown in Fig. 11, is secured on the previously mentioned bed plate 27 which is adjustably mounted on the machine frame F for movement lengthwise of the machine by means of the sliding joint 47. By this arrangement the several parts secured to the bed plate can be positioned to enable the hinge to be attached at any desired point along the margin of a card. The bed plate in turn is secured to the mounting plate 26 which supports block 48 having a kerf 49 through which the hinge material passes. This block cooperates with a gripping member 50 suitably notched as indicated at 51 to form a passage for the hinge material. A stop 52 secured to the block 48 closes the open side of the passage therein. The gripping member 50 is periodically reciprocated up and down since it is mounted at one end of a second bell crank lever 53 which is pivoted at 54 on an upright 55 carried by the mounting plate 26. The other end of this lever is provided with a follower roll 56 which engages the periphery of a cam 57 mounted on the cam shaft 42. A coil spring 58 positioned in a pocket in the plate 27 engages one end of the pin 59 mounted in a guideway in plates 26 and 27 so that the free end of the pin engages the right hand arm (Fig. 11) of the bell crank lever whereby the gripping member 50 normally presses down on the hinge material in the kerf 49 until the rise in cam 57 contacts the roller 56, thereby releasing the hinge material for feeding movement. It will be observed from the positions of cams 57 and 41 that the feeding movement starts when cam 57 is at its peak rise and cam 41 starts to drop off allowing the feed block 31 to advance with the hinge fabric. It will be observed by comparison of the cams 41 and 57, that the gripping member 50 clamps the strip of hinge material while the serrated feed spring 35 is effecting its retrograde movement in order to engage a new section of the strip.

From the clamping unit the strip passes to the cutting unit where it is cut into pieces or hinges of desired length, such as shown at 6 in Fig. 1. The cutting unit comprises a block 61 secured to

the mounting plate 26, which block is provided with a kerf 62 cut therein to afford a passage through which the hinge strip passes. The stop 52 attached to the face of the block closes the open side of this passage. A fixed shearing blade 64 is secured to the front face of the block 61 as shown in Fig. 12 to cooperate with a movable shearing blade 65 to cut off successive lengths of the hinge strip 6. The movable shearing blade 65 is mounted on one end of a lever 66 pivoted at 67 on an upright 68 detachably secured to the mounting plate 26. The other end of the lever 66 is provided with a roller 69 which engages the periphery of a cam 70 mounted on the cam shaft 42. A coil spring 71 connected to one arm of the lever 66 and to the bed plate of the machine tends to maintain the movable shearing blade out of engagement with its cooperating fixed blade except at such times as the cam 70 and its follower 69 bring these blades into engagement. It will be noted that the cam 70 is so mounted on the cam shaft 42 that the cutting unit effects the severing of a section of a hinge strip during the time that the clamp 50 is holding the hinge strip stationary.

The fabric hinges after being thus cut to length are applied to the index card and to this end an index card and a hinge are now brought into proper relation. As shown in Fig. 14 there is provided a tiltable platform 72 to which one index card at a time is supplied by suitable feed mechanism (not shown). This platform is held in horizontal position during the time that the hinges are applied to a card and then is tilted to an inclined position as shown in dotted lines in Fig. 14 whereby the card is discharged from the platform. The tilting feature of the platform is used in cooperation with an optional feed mechanism for the index card (not shown). When the feed mechanism is not applied the platform 72 is fixed in a horizontal position.

The operations of the platform are effected in timed relation to the other operations of the machine by a link 73 operated by a cam 74. The link 73 is pivoted to one end of a link 75, pivotally mounted at 76 on the frame F of the machine. The other end of link 75 carries a cam follower 78 in engagement with the cam 74 mounted on a counter-shaft 79 driven in timed relation with cam shaft 42.

An ejector including an ejector arm 80, cooperates with the platform to gauge or position one edge of the card during one stage of the operation and during another stage of the operation initially pushes the card down the inclined platform. The left end of the ejector arm 80 (Fig. 14) is provided with an angular gauge plate 81 into the apex of which the edge of an index card is fed to insure that the card is properly positioned for the application of the hinge thereto. After the hinge has been applied, this plate gives the card an initial push in its travel down the platform 72, which at that time is in inclined position. The ejector arm 80 is slidably mounted on the block 82 which is provided with a longitudinal groove 83 and which is attached to the mounting plate 26. The ejector arm has a slot 86 therein in superimposed relation with the groove 83 which slot is engaged by the rib 84 on a retaining plate 85 to limit the arm to longitudinal movement. The retaining plate with its rib passing thru the slot on the ejector arm is bolted to the block 82 so that the rib 84 seats in the groove 83 on the block. The arm 80 at its righthand end (Fig. 14) is provided with downwardly extending bracket 87 in which a stub shaft 88 is secured. This shaft supports a roller or follower which engages the periphery of a cam 89 also mounted on the cam shaft 42. A coiled spring 90 partially housed in the end recess 91 in the block 82 has its other end engaging a face of the bracket 87 and the projecting end of a set screw 92, the head of which engages the flattened face 93 of a fixed stop to limit the right-hand movement of the ejector arm 80.

The upper lefthand corner of the block 82 (Fig. 14) has a recess in which there are secured two tapered end pieces 94. These pieces define a flat groove 95 terminating in a circular groove 96 in which grooves the body portion of the individual hinges travel, the flaps of the hinges being now bent backward against the tapered faces of the pieces 94. Guide plates 97 secured in spaced relation to the tapered faces of the blocks 94 afford a space in which the rearwardly bent flaps 9 and 10 of the hinges are guided, since the hinge material at this time is cut into hinges. In order to insure that the hinges will enter the grooves 95 and 96, as well as the spaces between the guide plates 97, and the pieces 94, the faces of these pieces where the hinges enter therein are tapered as indicated at 98 and 99 in Fig. 15*a* toward the cut off block so that the somewhat flattened flaps 9 and 10 of the hinge can be received and opened up to the angular relation controlled by the tapered faces of the pieces 94. It will be understood that the guide pieces 94 are stationary and that the ejector plate 81 in one of its positions, is brought closely adjacent to the projecting ends of these pieces so that the edge of the card will be in proper spaced relation to the hinges to be applied thereto. It will be understood that the guide pieces 94 are of such size and the grooves 95 and 96 therein are of such length that a series of cut off hinges are guided in these grooves at the same time and each cut off hinge pushes the next hinge in the series toward the position in which it is applied to the card.

The next unit in the machine following the card-gauging and ejecting unit is the hinge applicator best shown in Figs. 17, 18, 19 and 20. This portion of the machine includes a carriage 100 which reciprocates transversely of the line of travel of the hinges and which carries hinge-applicator jaws 101. The guide plates 102 and the block 103 secured to the bed plate 27 provides a track in which the slide 104 of the carriage 100 reciprocates (Fig. 20). This carriage is provided at one end with an arm 105 which carries a follower or roller 106 in position to engage the cam 107 on the cam shaft 42. The cam 107 times the movement of the carriage toward and away from the card, the forward (to the left in Fig. 17) movement being positive, the retrograde movement being caused by the coil spring 108. Spring 108 has its right end engaging a recess 109 in the sliding block and its other end engaging a fixed upright 110 secured to the stationary block 103. Said retrograde movement is limited by a stop 140 so that the follower 106 engages cam 107 until the stop 140, secured to the stationary block 103, contacts the sliding block 104. By this arrangement the carriage is reciprocated at right angles to the line of travel of the hinges all under the control of the cam 107. Fixed pedestals 111 positioned at each side of the carriage fixedly support a pair of cooperating spring fingers 112. The free ends of these fingers have a width less than a hinge length and are slightly curved

as indicated at 113 to engage the rounded fold of the hinge. The carriage is also provided with hinge applicator jaws 101. These jaws are pivotally mounted at an intermediate portion thereof, as indicated at 114, on the carriage. The righthand ends of the arms forming the jaws are provided with followers 115, one of which engages the cam 116 and the other of which engages the cam 117, so that the applicator jaws open and close under the control of the mentioned cams after the manner similar to a scissors. The applicator jaws are normally maintained in closed relation by means of the L-shaped springs 118 which have their short ends engaging in the jaws 101 and their long ends inserted in the carriage 100 thru parallel horizontal holes above and below the pivot 114. It will be understood that the jaws 101 are opened by means of the cams 116 and 117 to receive a hinge when the carriage is in its retracted position shown in Fig. 14. The spring 108 is sufficiently stiff to hold the carriage back against stop 140 during the opening of the jaws. The front ends of the applicator jaws 101, terminate in tapered end faces 119 down which the flaps of a hinge slide into position on the card as the carriage moves these fingers along the surface of the card as shown in Fig. 18. It will be noted that the jaws 101 except for a portion immediately adjacent the tapered faces thereof have cut away portions 120 to provide the space for the spring fingers 112 which hold the rounded or folded edge of the hinge stationary while the flaps thereof are being applied to the card. As shown in Fig. 17 the spring fingers 112 are normally sprung apart to receive the fold of the hinge and are closed by the jaws 101 as the jaws begin to move forward under the action of cam 107, to grip the fold of the hinge. If desired the spring fingers 112 may be omitted, since the hinge body will be held in the correct position by the card 5 engaging the bight portion of the hinge flaps.

It will be noted from Figs. 4 and 9, that the applicator jaws, shown in Fig. 17, have moistening pads or applicators 121 superimposed thereover so that the back-turned flaps of a hinge with the adhesive thereon exposed, can be moistened prior to the application of the hinge to the card. Moistening pads 121 (see Fig. 21) are carried at the free ends of a second pair of scissor arms 122 which are pivoted respectively at 123 and 124 on an adjustable portion of the frame. The other ends of these scissor arms carry followers or rollers 125 engaging the cams 126 on the cam shaft 42. Spring 127, having its ends connected to the respective pairs of arms 122, tends to hold these arms closed except at such times as they are opened by the action of the followers 125 and cams 126. It will be understood that moisture is applied to the pads 121 through suitable tubes such as 128 or any other convenient arrangement. It will be appreciated that the timing of the various parts is such, that the moistening pads 121 are brought down on the adhesive surface of the hinge flaps, so that the adhesive thereon is suitably moistened at the time when the applicator jaws position the flaps of the hinge down onto the surface of the card. The cams 126 move the moistening pads or applicators through the following stages: First, The moistening pads are slightly apart to admit feeding of a hinge into the applicator jaws 101; Second, Pads come together to moisten the adhesively coated hinge flaps; Third, Pads are moved far apart to clear the applicator jaws in their forward movement as the hinge flaps are applied to the index card. It will be understood the invention is not limited to the above manner of rendering the hinge flaps adhesive since it is within the purview of this invention to apply adhesive directly to uncoated hinge flaps by supplying adhesive to the pads or applicators 121. Furthermore, the moistening pads or adhesive applying pads may be eliminated entirely and instead the flaps of the hinge strip might be coated with a tacky adhesive or the adhesive may be applied directly to the cards.

In the description thus far given, means have been disclosed for applying only one hinge to a card. It will be understood, however, that it is usually desirable to apply two hinges to one edge of a given card and thus it becomes necessary to duplicate the mechanism just described, since in Figs. 4 and 9 one half only of the machine is illustrated. It will be understood however, that identical mechanism will be provided at the righthand of that shown in the mentioned figures, except that the hinge material instead of being fed from left to right will be fed from right to left, and the respective units of this portion of the machine will be mounted on the frame F and arranged in the proper order so that two applicator units will be positioned adjacent each other but with proper spacing therebetween so that two hinges will be applied to the card in desired spaced relation. By supporting each of the applicator units on a bed plate adjustably mounted on the slide 47 of the frame F, the spacing between the two hinges of an index card can be regulated.

While the apparatus and method are particularly adapted for applying hinges to index cards, it will be appreciated that they may be used for applying hinges, tabs or similar devices to any sheet articles or the like. The invention is therefore, susceptible to many variations and modifications and the present disclosure is to be construed as including such variations and modifications which would occur to one skilled in the art.

What I claim is:

1. In an apparatus for applying hinges to a card or the like, means for feeding a strip of hinge material, said strip including a body portion and a pair of overlapping flaps, a former for folding said flaps backwardly toward said body portion, means for cutting the folded hinge material into predetermined lengths, and means for applying the cut lengths of hinge material in succession to cards.

2. In an apparatus for applying a hinge or tab to a card or the like which comprises means for guiding a strip of hinge material, said strip including a body portion and flaps, means adjacent said guiding means for folding said flaps backwardly over the opposite faces of said body portion, means for cutting the folded hinge material into predetermined lengths, means for rendering the exposed surfaces of said flaps adhesive, and means for supporting a length of the cut hinge material and applying the adhesive surfaces of said flaps to a card.

3. In apparatus of the character described, means for supporting a strip of hinge material, which strip includes a body portion and a pair of overlapping flaps, a former adapted to receive said strip of hinge material and being shaped to fold said flaps backwardly over the opposite faces of the body portion to expose their inner surfaces, means for cutting said folded hinge material into predetermined lengths

to form hinges, means for rendering the inner surfaces of said flaps adhesive, means for supporting the body portion of a hinge and means for moving the inner surfaces of the flaps thereof into contact with a card.

4. In an apparatus for applying a hinge to a card or the like which comprises a reel adapted to support a strip of hinge material including a body portion and a pair of overlapping flaps having their inner faces coated with adhesive, guiding means adapted to receive said hinge material as it unwinds from said reel, a former to receive the hinge material from said guiding means, said former being shaped to fold said flaps back on the opposite faces of the body portion of said material, feeding means to receive the folded hinge material and to move said hinge material progressively a predetermined distance, cutting means adapted to cut said hinge material into predetermined lengths, and means for supporting the cut lengths of hinge material in a position to be applied to a card, said means including mechanism to press said hinge material on a card.

5. In a machine for applying a hinge to a card or the like comprising a frame, a bed plate, a mounting plate slidably carried by said bed plate, a feed member on said mounting plate adapted to move a strip of hinge material intermittently, cutting means adapted to cut said hinge material into hinges of predetermined lengths as fed by the feeding means, a card gauge on said machine, and applicator jaws carried by said machine for applying hinges to cards held by said gauge.

6. In a machine of the class described comprising a frame, a former mounted on said frame, feeding means mounted on said frame for moving a strip of hinge material including a body portion and a pair of overlapping flaps over said former, said former being shaped to fold said flaps backwardly over said body portion, means for cutting said hinge material into predetermined lengths, and means for applying said predetermined lengths of hinge material to cards.

7. A machine of the class described, comprising a frame, a bed plate slidably carried by said frame, a feed member mounted on said bed plate to receive a strip of material, means to reciprocate said feed member to move said strip a predetermined distance along the machine, a cutting member carried by said bed plate, means for operating said cutting member in timed relation with said feed member whereby predetermined lengths of the strip of material moved by said feed member are cut from said strip, and means carried by said frame and movable transversely to the direction of movement of said hinge material for supporting said lengths of material and for applying the same to a card or the like.

8. An apparatus for applying a hinge or tab to a card or the like which comprises means for guiding a strip of hinge material, said strip including a body portion and overlapping flaps, means for separating said flaps, means for cutting the hinge material into predetermined lengths and means for supporting a length of the cut hinge material and applying the flaps to a card or the like.

9. A machine of the class described comprising a frame, a former mounted on said frame, feeding means mounted on said frame for moving a strip of material including a pair of overlapping flaps over said former, said former being shaped to separate said flaps, means for cutting said material into predetermined lengths and means for applying said predetermined lengths of material to the margin of a sheet member.

10. A machine of the class described, comprising a pair of arms, fluid applying means on each arm, means for supporting said arms with said means facing each other, and means for intermittently moving said arms to vary the spacing between said fluid applying means.

11. A machine of the class described comprising a support, a pair of arms pivotally mounted on said support, fluid applying means carried by adjacent free ends of said arms, and means for intermittently moving said arms about their respective pivots to vary the spacing between said fluid applying means.

12. In a machine of the class described, a support, a platform for holding a sheet member in a given plane with a portion of a margin of the sheet member between separated flaps of a tab carried by said support, means for moving said support toward said platform to apply the flaps to the margin of the member, and means for moving said platform after the flaps have been applied, to discharge the sheet member therefrom.

13. In a machine of the class described, a carriage mounted for reciprocating movement, a pair of applicator jaws mounted on said carriage adapted for angular movement about an axis substantially perpendicular to the line of motion of the carriage, means for reciprocating said carriage, means for maintaining said jaws in clamping relation during at least a portion of the forward movement and the return movement of the carriage and means for angularly moving said jaws in timed relation to the reciprocating movement of said carriage.

14. The method of applying a hinge or the like to a card or the like, which method comprises moving a strip of hinge material having a body portion and overlapping flaps joined to one edge of said body portion, cutting said material into a series of hinges, moving said series of hinges in a direction parallel to one of the edges of the cards to which the hinges are to be attached in succession, moving one of said cards between the flaps of the first hinge of the series until the edge of said card substantially engages the junction of said flaps with said body portion and adhesively securing the flaps of said hinge to said card.

15. The method of applying a hinge or the like to a card or the like, which method comprises providing a strip of hinge material including a body portion and a pair of overlapping flaps, folding said flaps backwardly into approximately parallel relation, cutting a predetermined length of the folded hinge material from said strip to provide a hinge, partially unfolding the flaps of said hinge, supporting a card or the like with one of its margins adjacent the junction of the flaps with the body portion of the partially unfolded hinge and adhesively securing said flaps to the opposite faces of the margin of said card.

16. The method of applying a hinge or the like to a card or the like, which comprises supplying a strip of hinge material including a body portion and a pair of overlapping flaps connected thereto, folding said flaps over the opposite faces of the body portion to expose the inner faces of said flaps, moving said folded strip of hinge material a predetermined distance, cutting a predetermined length of the hinge material to provide a hinge, rendering the exposed inner faces of the

flaps of said hinge adhesive and applying the adhesive faces of said flaps of the hinge to a card.

17. In an apparatus for applying a hinge or tab to a card or the like which comprises means for guiding a strip of hinge material, said strip including a body portion and flaps, means adjacent said guiding means for folding said flaps backwardly over the opposite faces of said body portion, means for cutting the folded hinge material into predetermined lengths, and means for supporting a length of the cut hinge material and applying the flaps thereof to a card.

18. In an apparatus for applying a hinge to a card or the like which comprises a guiding means adapted to receive hinge material including a body portion and a pair of overlapping flaps, a former to receive the hinge material from said guiding means, said former being shaped to fold said flaps back over the opposite faces of the body portion of said material, feeding means to receive the folded hinge material and to move said hinge material progressively a predetermined distance, cutting means adapted to cut said hinge material into predetermined lengths and means for supporting the cut lengths of hinge material in a position to be applied to a card, said means including mechanism to press said hinge material on a card.

19. In a machine of the class described, comprising a frame, a former mounted on said frame, means mounted on said frame for moving hinge material including a body portion and a pair of overlapping flaps over said former, said former being adapted to fold said flaps backwardly over said body portion, and means for applying said hinge material to cards or the like.

20. In a machine of the class described for applying to a card or the like a section of hinge material, including a body portion and a pair of overlapping flaps each having adhesive on their inner surface, comprising a frame, means on said frame for opening the flaps of a section of said hinge material to expose said adhesive surfaces, means for gripping the exposed adhesive surfaces of said flaps and for moving said section along said frame, and means carried by said frame for supporting said section of hinge material and for applying the flaps thereof to a card or the like.

21. In a machine of the class described, a frame, means on said frame for moving a section of hinge material including a body portion and a pair of flaps overlying the opposed surfaces of said body portion along the frame, means for partially unfolding said flaps, and means carried by said frame for supporting said partially unfolded section of hinge material and for applying the same to a card or the like.

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